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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,684	07/02/2001	William H. Rousseau	9846	6891

7590

01/24/2002

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EXAMINER

DOERRLER, WILLIAM CHARLES

ART UNIT

PAPER NUMBER

3744

DATE MAILED: 01/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/895,684

Applicant(s)

ROUSSEAU, WILLIAM H.

Examiner

William C Doerrier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-8, drawn to a cooling apparatus with motor control which senses the temperature of heat transfer water and cools the control electronics, classified in class 62, subclass 228.4.
- II. Claims 9 and 10, drawn to a method of selecting a compressor for a cooling system, classified in class 62, subclass 115.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be performed without the compressor or controller which would be selected by the process of claim 9, since no claim in group I claims any power factor. Likewise the method of claim 9 can be performed by a system other than that claimed in claim 1 since claim 9 makes no mention of how the frequency of the compressor is controlled or cooling the control apparatus.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

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During a telephone conversation with William Habelt, applicant's attorney, on January 18, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9 and 10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4,6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clemens et al in view of Stark.

Clemens et al disclose applicant's basic inventive concept, a cooling system which controls the frequency of the compressor based solely on the temperature of a heat transfer fluid which passes through the evaporator, substantially as claimed with the exception of using condensed refrigerant to cool the control electronics. Stark shows this feature to be old in the cooling art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention from the teaching of Stark to modify the cooling system of Clemens et al by using condensed refrigerant to cool the control electronics to eliminate the need for a separate cooling system while still ensuring proper functioning and reliability of the control electronics. It is noted that the heat

transfer fluid of Clemens et al is brine, while applicant claims water. However Official Notice is taken that it is common to add chemicals to heat transfer water to lower the freezing point and as such a change of water to brine is seen as obvious design choice for a system which will not experience temperatures below the freezing point of water. In regard to claim 3, figure 2 of Stark shows refrigerant from the condenser being expanded, used to cool the control electronics and then sent to the chiller.

Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clemens et al in view of Stark as applied to claims 1-4,6 and 7 above, and further in view of Arthur.

Clemens et al, as modified, discloses applicant's basic inventive concept, a cooling system which uses the temperature of heat transfer fluid which passes through the evaporator to control the compressor, substantially as claimed with the exception of enabling power of different frequency and voltage to power the system. Arthur shows this feature to be old in the refrigeration art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention from the teaching of Arthur to modify the cooling system of Clemens et al by enabling power of differing voltage and frequency to power the system to enable one system to be used in a plurality of environments including different countries.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Helt et al and Goto et al show refrigeration systems which use the refrigerant to cool the control electronics. Takahashi et al, Goshaw et al, Shaw et al


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and Sibik show cooling systems which control the compressor using the temperature of heat transfer fluid passing through the evaporator as a control parameter. Jang shows a control system for a refrigeration system which can be used with various energy inputs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C Doerrler whose telephone number is (703) 308-0696. The examiner can normally be reached on Monday-Friday 6:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on (703) 308-2597. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.


William C Doerrler
Primary Examiner
Art Unit 3744

WCD
January 18, 2002